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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/673,344 | 09/30/2003 | Joseph B. Vergona | 53394.000717 | 3438 |

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EXAMINER

KOCH, GEORGE R

| ART UNIT | PAPER NUMBER |
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1734

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,344

Applicant(s)

VERGONA, JOSEPH B.

Examiner

George R. Koch III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-8,10-17,37-39,42-44 and 46-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-8,10-17,37-39,42-44 and 46-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/3/2006 has been entered.

Response to Arguments

2. Applicant's arguments filed 4/3/2006 have been fully considered but they are not persuasive.
3. Applicant's argument is generally directed towards whether "the registration control system of Sanders is based exclusively on positional data inputs (i.e., relative to an article length), and does not include a line speed input, sensed from the machinery or otherwise". However, Hergeth has been applied to show that line speed signals can come from the main drive or motor.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 2, 6-8, 10, 13, 14, 37, 38, 42-44, 46 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stuebe (US Patent 5,659,538), Sanders (US 6,101,912), Hergeth (US 6,888,083 B2) and Schleinz (US Patent 5,597,642).

As to claim 1 and 37, Stuebe discloses a generic method for correlating multiple processes in the manufacture of absorbent articles such as diapers (see title), the method comprising providing a moving substrate (item 12) to an cutter (item 14, 16, and 18), sensing a line speed target signal (item 28) from a web line speed near associated machinery (item 10, 10a, 10b), rotating an processing cylinder (items 14, 16, and 18) at a predetermined speed, based on the line speed reference signal, thereby to perform a process on the moving substrate at a predetermined distance frequency, sensing a phase difference signal (item 32) from a phase target machinery component (see column 4, line 14 to column 4, line 32) and setting an actual operating phase angle, based on the phase difference signal, to approximate a predetermined phase angle to thereby position the series of graphics on the moving substrate at a series of desired graphics locations (see column 4, line 33 to column 4, line 65). Stuebe discloses monitoring the calendaring, i.e., the driving of the webs.

Stuebe discloses the preferred embodiment wherein the position of the fastening tabs are detected as the line speed reference signal, and the phase angle of the rotary cutter is set. However, Stuebe discloses that the concept can be generalized to any two features of the diaper web, including both the printing and the cutting (see column 3,

lines 35-40). Therefore, Stuebe discloses that the line speed target machinery and phase target machinery as claimed.

However, Stuebe does not disclose that the line speed reference signal is detected from a line speed target machinery component as opposed to the web near the line speed machinery, nor does Stuebe also does not explicitly disclose that the line speed target machinery component is the main drive and that the signal is generated by an encoder that measures the angular velocity of the main drive. Stuebe also does not disclose any details related to the type of mechanism used to perform the printing operation.

Sanders discloses that the line speed reference signal which is used to modify a phase signal and phase machinery (cutter is detected from a line speed target machinery component (see Figure 1, item 72 and line 8, column 10 to column 10, line 25). The lineshaft encoder is the marker pulse that defines the predetermined, desired timing relationship (see column 9, lines 50-67), and ensures the desired timing and phasing relationship by setting the phase of the other machinery on the basis of the lineshaft encoder. Sanders discloses that encoders such as optical sensors can be used for the line speed target machinery (linear encoder 72). Sanders discloses that this enables proper phasing of the movement of the article to the operation, which one in the art would recognize creates a better product.

Additionally, Hergeth discloses that it is known in diaper manufacturing to utilize a line speed reference signal which is a measure of the actual speed and not the pulses, and uses this signal to control other operations. The drawings show that the

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line speed signal comes from, or is a measurement of, the main motor (item 12, i.e., a main drive) and is a measure of the actual speed of the line (see column 2, lines 28-30), and this measurement can be acquired either mechanically or electronically (i.e., similar to the optical sensor in Sanders).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such line speed target machinery, such as the main drive (as suggest by Hergeth) by use of an angular encoder (as suggest by Sanders) in order to ensure that the machinery is kept in the proper phasing and timing relationship and creates a better product.

Schleinz discloses that it is known to use rotary cylinder (i.e., graphic applicator) based printing mechanisms in diaper and undergarment manufacturing (see items 42, 44, and 46, and column 3, line 46 to column 4, line 6, and the specification in general). Schleinz discloses that this method of printing results in improved quality of print patterns and reduced cost of manufacture (see column 3, lines 36-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such rotary printing equipment in order to achieve improved quality of print patterns and reduced cost of manufacture.

As to claims 2 and 38, item 12 is a diaper, which includes a backsheet web (by definition, the layer which is on the rear side of the machinery).

As to claims 6, and 42, as stated in claims 1 and 37 above, Stuebe discloses that the web sensing and phase adjusting concept can be generalized to any two features, relative to each other, of the diaper web, including both the printing and the cutting

points. Sanders discloses using a motor sensing structure rather than a web sensing structure. Thus, Steube as modified by Sanders discloses that the phase target machinery component can be the cutter.

As to claim 7 and 43, Stuebe as modified by Sanders above discloses one line speed control mechanism and a phase control mechanism, and thus, that the components are different machinery components.

As to claim 8 and 44, Stuebe as modified by Sanders above also discloses that the line speed mechanism and phase control mechanism can be the same mechanism (see relations between items 44, 32 and 14).

As to claim 10 and 46, Stuebe does disclose monitoring of the phase, but does not disclose that the sensor can be an inductance sensor. Official notice is taken that the use of inductance sensors for rotary operations is well known and conventional. Such sensors provide feedback as to the phase of a rotary element, improving alignment and positioning. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize such an inductance sensor in order to ensure proper alignment and positioning.

As to claim 13, Schleinz as incorporated is a flexographic print system.

As to claim 14, Schleinz as incorporated discloses providing the moving substrate to a second print cylinder (Schleinz discloses print cylinders 42, 44, and 46) and rotating the second print cylinder at the predetermined speed, thereby printing the second series of graphics (in this case, additional colors).

As to claim 49, official notice is taken that the use of cut and space devices (i.e., graphic or label applicators) is well known and conventional. Such a mechanism allows for the graphics to be manufactured with another machines/location and then later applied to the absorbent article, reducing methodology and machinery complexity. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such structures in order to reduce methodology and machinery complexity.

6. Claims 2-3 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stuebe, Sanders, Hergeth and Schleinz as applied to claims 1, and 37 above, and further in view of the admitted prior art (especially page 1).

Claims 2 and 38 are rejected above, under the rationale that the single present layer of Stuebe is considered a backsheet web. However, Claims 3 and 39 require additional layers in conjunction with a backsheet web, which forces a definition of the backsheet web in view of those layers.

Both Stuebe and Schleinz are silent as to the separate components of the web. Stuebe does disclose cutting the assembly at a series of cuts with a cutter (item 16), and that the phase target machinery component can comprise the cutter.

However, the admitted prior art discloses that the substrate comprises a backsheet web, and further discloses providing a supply of absorbent pads, a topsheet web, joining the topsheet web to the backsheet web with the absorbent pads located therebetween to form an absorbent core assembly. One in the art would immediately

appreciate that this method provides for a form-fitting garment or diaper with relatively waterproof outers and absorbent inners, ensuring wetness protection. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such layers in order to ensure wetness protection in the final product.

7. Claims 11, 12, 15, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stuebe, Sanders, Hergeth and Schleinz as applied to claims 1, 14, and 37 above, and further in view of Wilhelm (US 6,075,178)

While Stuebe, Sanders and Schleinz do disclose printing, which is a generic graphic, they do not specifically disclose wetness indicators and decorative graphics.

Wilhelm discloses that it is known to utilize wetness indicators and decorative graphics in diaper manufacture (see, for example, the abstract, and column 2).

Furthermore, one would immediately appreciate that the wetness indicator of Wilhelm would meet the feature requirement of Stuebe. Wilhelm discloses that wetness indicators provide improved comfort to the wearer (see column 2, lines 46-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated wetness indicators in order to provide improved comfort to the wearer.

8. Claims 16-17 and 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stuebe, Sanders, Hergeth and Schleinz as applied to claims 1 and 37 above, and further in view of Harrison (US 5,003,876).

Stuebe, Sanders and Schleinz as applied to claim 1 is silent as to shutdown modes and startup modes.

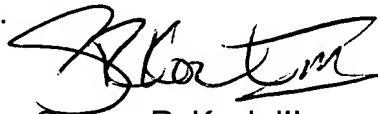
Harrison discloses that it is known to disengage a printer (i.e., graphic applicator), during the detection of a shutdown (operation of the ink on/off switch) and rotate at an idle speed, and then startup from an idle speed. Harrison discloses that the idle rotation ensures against the ink drying out (see column 11, lines 11-29) and then starts up on the on operation (see column 11, lines 52 to column 12, line 12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the startup/idle/shutdown methods of claims 16, 17, 50 and 51 in order to prevent ink dry-out and better maintenance of the graphic material.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-866-377-8642 and giving the operator the above TDD number. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



George R. Koch III
Primary Examiner
Art Unit 1734

GRK
4/14/2006